INFN PADOVA

Dipartimento di Fisica e Astronomia Galileo Galilei
UNIVERSITÀ DEGLI STUDI DI PADOVA

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ore 14:30
Aula C. Voci

Dr. Pierluigi Bortignon

CERN

"Search for the Higgs boson in its decays to the second-generation fermions"

The LHC has successfully operated at unprecedented beam energy and luminosity producing a large number of Higgs bosons. Worldwide it is the only facility able to directly probe the nature of the Higgs boson and directly measure its properties. The measurement of its couplings with Standard Model particles and the rate of its rare decays are at the center of the physics program of CMS. The key role of the Higgs mechanism in the Standard Model makes these measurements of paramount importance, not only in order to understand the nature of the fundamental interactions but also in the search of new physics, where they can give crucial indications on where it could be hiding. In this seminar the speaker will present the current status of the Higgs boson coupling measurements with the CMS detector, with a particular focus on the searches of its decays to the second-generation fermions, such as muons and charm quarks.

Tommaso Dorigo